

AMENDMENTS TO THE SPECIFICATION:

Please replace the paragraph beginning on page 2, line 23 as follows:

A polymer composition according to the invention (denoted hereafter by polymer TiO composition) may be translucent or be colored. The composition is translucent when it is shielded from the light and when the titanium is essentially in the Ti^{4+} form, the polymer then corresponding to the formula $TiO(OH)_2$. When the titanium is essentially in the Ti^{3+} form in the TiO polymer, a broad absorption band exists in the visible range (between 400 and 850 nm), which results in a violet, blue, midnight blue or green coloration of the composition. The coloration changes with the proportion of Ti^{3+} . It goes from violet green, in the case of low Ti^{3+} concentrations to green blue in the case of high concentrations. When all the titanium is in the Ti^{3+} form, the TiO polymer corresponds to the formula $TiO(OH) (H_2O)$.

Please replace the paragraph beginning on page 3, line 29 as follows:

In a second embodiment, the TiO polymer composition of the invention is obtained directly in reduced form, in which at least a part of the titanium is in the Ti^{3+} oxidation state by a method consisting in reducing $TiOCl_2$ using a species that is oxidizable at a potential of less than -0,05 V with respect to a standard hydrogen electrode. As an example, mention may be made of metals in oxidation state zero, such as Ni, Fe, Al, Cr, Zr, Ti, Nb, Cs, Rb, Na, K, Li, La and Ce, ionic compounds, in which the cation is chosen from V^{2+} , Ti^{2+} and Cr^{2+} , and ionic compounds in which the anion is chosen from $S_2O_3^{2-}$, H^- , and S_2^{2-} . Zinc is particularly preferred. In this case,

the TiO polymer composition according to the invention is obtained with a coloration. If it is then irradiated by UV radiation, the content of Ti³⁺ species increases and its coloration changes from violet green to blue violet and then to green blue as the content of Ti³⁺ ions increases.

Please replace the paragraph beginning on page 8, line 3 as follows:

The structure of the TiO(OH)₂ polymer gel was characterized by titanium K-edge EXAFS analysis. The results of the fine structure analysis give the number N of neighboring atoms, the distance R between an absorbent atom and its neighbors, the Debye-Waller factor σ, the energy shift ΔE₀ and the residue p. The results are given in the table below.

TiO(OH) ₂	N	R(Å)	σx10 ² (Å)	ΔE ₀ (eV)	p(%)
Ti-O	3.91	1.89	1.3	0.48	
Ti-O	2.08	1.98	2.8	0.00	2.32
Ti-Ti	2.28	2.92	6.3	2.84	
Ti-Ti	4.1 1.71	3.27	1.7	6.85	